

Description of two new species of Muricidae (Gastropoda) from Mozambique, East Africa, and range extension of *Chicoreus (Triplex) elisae* Bozzetti, 1991

Descripción de dos nuevas especies de Muricidae (Gastropoda) de Mozambique, África del este, con comentarios sobre la distribución de *Chicoreus (Triplex) elisae* Bozzetti, 1991

Roland HOUART*

Recibido el 28-VI-1999. Aceptado el 23-IX-1999

ABSTRACT

Chicoreus (Triplex) elisae Bozzetti, 1991 is recorded for the first time from Pemba, North Mozambique. It is compared with the most similar species and illustrated. *Chicomurex rosadoi* spec. nov. is described from off Quissico, and compared with *Chicomurex turschi* (Houart, 1981). *Siphonochelus rosadoi* spec. nov. is described from off Zavora, and compared with *S. arcuatus* (Hinds, 1843), *Siphonochelus japonicus* (A. Adams, 1863), *Siphonochelus nipponensis* Keen and Campbell, 1964, and *Siphonochelus boucheti* Houart, 1991.

RESUMEN

La especie *Chicoreus (Triplex) elisae* Bozzetti, 1991 se cita por primera vez en Pemba, al norte de Mozambique. Se compara con las especies con las que guarda un mayor parecido y se incluye una ilustración de la misma. Además, se describen dos nuevas especies en el área de estudio: *Chicomurex rosadoi* spec. nov. de Quissico, comparándola con *Chicomurex turschi* (Houart, 1981); y *Siphonochelus rosadoi* spec. nov. de Zavora, que se compara con *S. arcuatus* (Hinds, 1843), *Siphonochelus japonicus* (A. Adams, 1863), *Siphonochelus nipponensis* Keen y Campbell, 1964, y *Siphonochelus boucheti* Houart, 1991.

KEY WORDS: Gastropoda, Muricidae, Mozambique, new species, new record.

PALABRAS CLAVE: Gastropoda, Muricidae, Mozambique, nuevas especies, nuevas citas.

INTRODUCTION

The malacological fauna of Mozambique (Fig. 1) is interesting because the northern end of the region is situated approximately midway between the tip

of South Africa and Somalia, and its southern end adjoins Natal (South Africa). As a result, some muricids and other molluscs described from Somalia

* Research Associate, Institut royal des Sciences naturelles de Belgique. Département des Invertébrés Récents. Rue Vautier, 29, B-1000 Bruxelles, Belgium. roland.houart@skynet.be

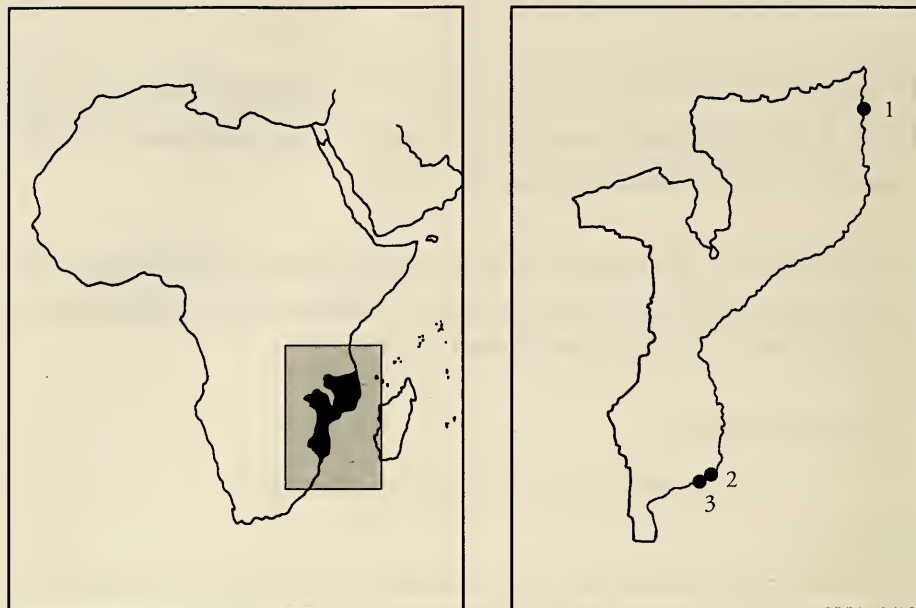


Figure 1. Map of Mozambique, showing sample sites. 1: Pemba; 2: Zavora Point; 3: Quissico.

Figura 1. Mapa de Mozambique, mostrando las localidades muestreadas. 1: Pemba; 2: Zavora Point; 3: Quissico.

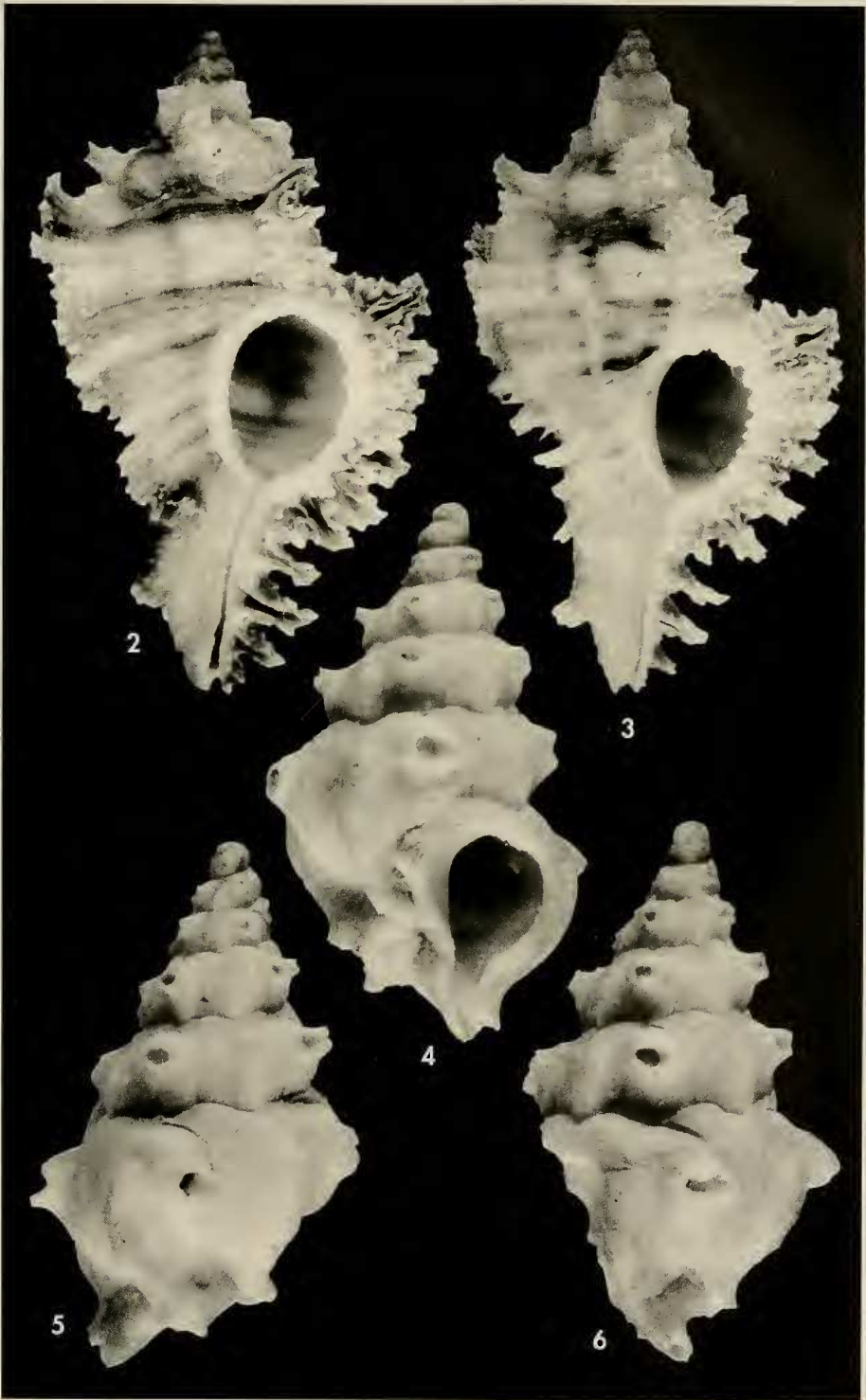
and neighbouring localities, as well as species from South Africa, are also represented in Mozambique. Its tropical or subtropical muricid fauna is quite similar to that of other Indo-West Pacific regions, although a few species described from Mozambique are apparently endemic to this region, or range into neighbouring areas such as Tanzania or Madagascar (VOKES, 1978; HOUART, 1986; PONDER AND VOKES, 1988; HOUART, 1990, 1995, 1998). Noteworthy records were also reported in VOKES (1978), and HOUART (1990).

Abbreviations:

- AMS: The Australian Museum, Sydney, Australia.
- BMNH: The Natural History Museum, London, U.K.
- MNHN: Muséum National d'Histoire Naturelle, Paris, France.
- NMSA: Natal Museum, Pietermaritzburg, South Africa.
- NSMT: National Science Museum, Tokyo, Japan.
- dd: empty shell(s).
- lv: live-taken specimen(s).

(Right page) Figures 2, 3. *Chicoreus (Triplex) elisae* Bozzetti, 1991, North Mozambique, Pemba, Uimbe Beach, 2-3 m, dead coral bottom, coll. I. Leitão. 2: 29.9 mm; 3: 26.6 mm. Figures 4-6. *Siphonochelus rosadoi* spec. nov. South Mozambique, off Zavora, trawled 450 m, mud bottom, 9.6 mm, holotype NMSA L4822/T1385.

(Página derecha) Figuras 2, 3. *Chicoreus (Triplex) elisae* Bozzetti, 1991, norte de Mozambique, Pemba, Uimbe Beach, 2-3 m, fondo de coral muerto, coll. I. Leitão. 2: 29,9 mm; 3: 26,6 mm. Figuras 4-6. *Siphonochelus rosadoi* spec. nov. sur de Mozambique, frente a Zavora, dragado a 450 m, fondo de fango, 9,6 mm, holotipo NMSA L4822/T1385.



SYSTEMATICS

Family MURICIDAE Rafinesque, 1815
Subfamily MURICINAE Rafinesque, 1815
Genus *Chicoreus* Montfort, 1810
Subgenus *Triplex* Perry, 1810

Type species (by monotypy): *Triplex foliatus* Perry, 1810 (= *Murex palmarosae* Lamarck, 1822), Recent, Indo-West Pacific.

Chicoreus (Triplex) elisae Bozzetti, 1991 (Figs. 2, 3)

Chicoreus elisae Bozzetti, 1991, *La Conchiglia* 22 (260): 43, figs 1-3.

Chicoreus (Triplex) elisae Bozzetti; Houart, 1992, *Mém. Mus. Nat. Hist. nat.*, (A), 154: 75, figs 183, 356-357.

Material examined: North Mozambique, Pemba (ex Porto Amelia), Uimbe Beach, 2-3 m, dead coral bottom (6 lv).

Remarks: *Chicoreus elisae* was described from Ras Hafun, Somalia, and to my knowledge, has not yet been recorded from elsewhere. Its discovery off North Mozambique, if not unexpected, is a very interesting range extension. It was originally compared with *C. rubescens* (Broderip, 1833), *C. trivialis* (A. Adams, 1854), and *C. groschi* Vokes, 1978. The quality, and the number of specimens examined (6) allowed me to compare it more carefully with the above mentioned taxa and with other similar species.

C. trivialis has a more elongate shell with a higher spire. It is light coloured in juveniles and becomes dark brown in adults. It has a high, single, intervarical node on the penultimate and the last whorls, narrower, more equally shaped spiral sculpture, and an adpressed suture (impressed in *C. elisae*).

C. groschi has a relatively larger, uniformly dark brown shell with non-fringed varices, a broader aperture, more equally shaped, and narrower spiral sculpture.

C. brunneus (Link, 1807) constantly differs in having less fringed varices, a smaller, narrower protoconch with more numerous whorls (2 or 3 vs 1.5), and a deeper, narrower, anal notch.

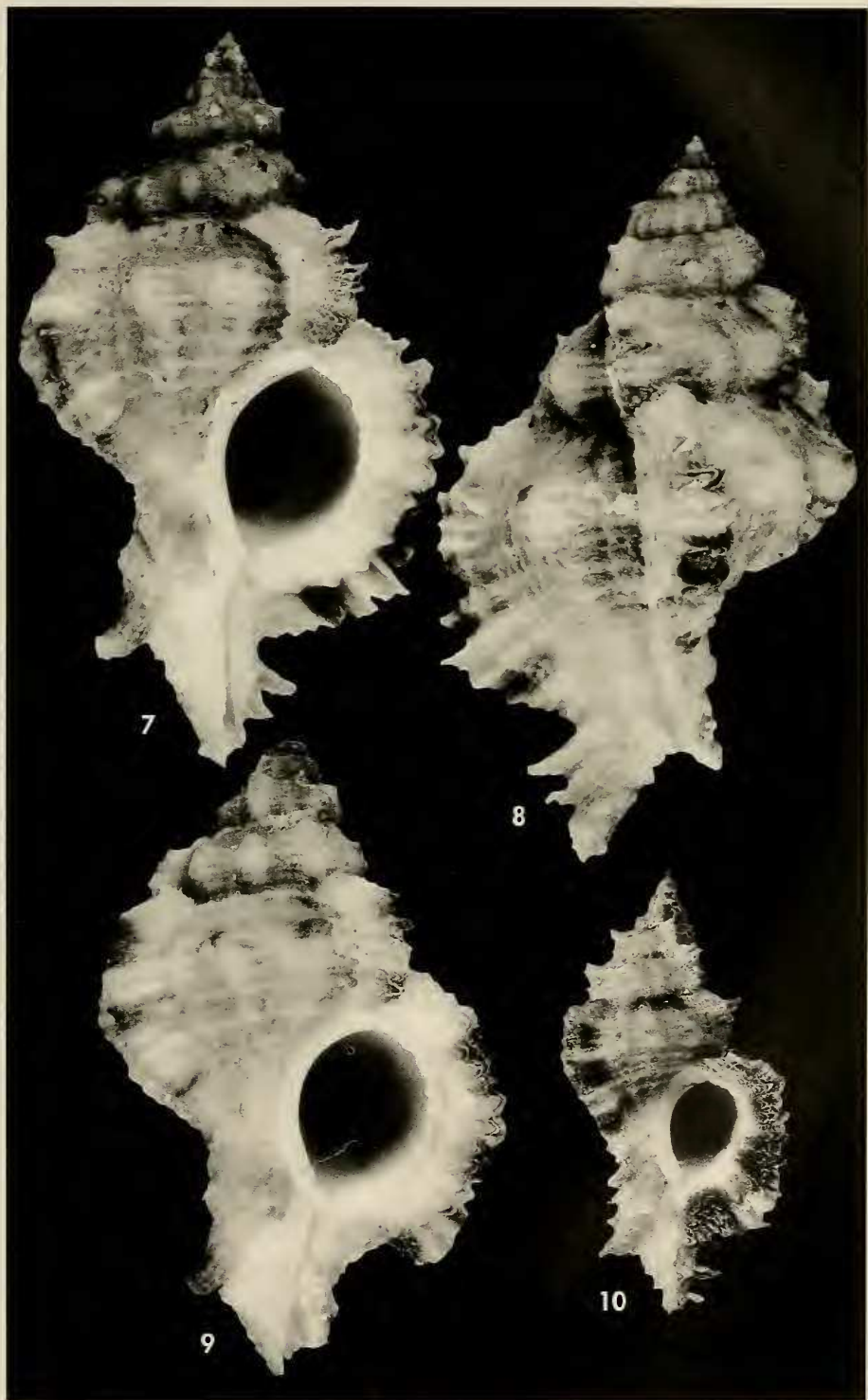
C. territus (Reeve, 1845) is larger at the same number of teleoconch whorls. It also has a somewhat triangular outline as in *C. elisae*, but it has webbed varices instead of the fringed ones in *C. elisae*. Moreover, *C. territus* has a relatively longer siphonal canal, and narrower, more numerous spiral cords.

C. elisae also resembles juveniles of *C. microphyllus* (Lamarck, 1822), but *C. microphyllus* as a more slender outline with a higher spire and less squamous/fringed varices. Furthermore, the protoconch of *C. microphyllus* is more acute, consisting of 1.75-3 whorls, compared to the broad protoconch of *C. elisae* with 1.5 rounded whorls.

As already noted in HOUART (1992), *C. elisae* is not similar to *C. rubescens*.

(Right page) Figures 7-9. *Chicomurex rosadoi* spec. nov. Mozambique, off Quissico, 100-120 m. 7, 8: 48.6 mm, holotype NMSA L4821/T1384; 9: 39.9 mm, paratype coll. C.P. Fernandes. Figure 10. *C. turschi* (Houart, 1981), Papua New Guinea, Hansa Bay, off Durangit, 45-60 m, 35.5 mm, paratype coll. R. Houart.

(Página derecha) Figuras 7-9. *Chicomurex rosadoi* spec. nov. Mozambique, frente a Quissico, 100-120 m. 7, 8: 48,6 mm, holotipo NMSA L4821/T1384; 9: 39,9 mm, paratipo coll. C.P. Fernandes. Figura 10. *C. turschi* (Houart, 1981), Papua Nueva Guinea, Hansa Bay, frente a Durangit, 45-60 m, 35,5 mm, paratipo coll. R. Houart.



Genus *Chicomurex* Arakawa, 1964

Type species (by original designation): *Murex superbus* Sowerby, 1889, Recent, West Pacific.

Chicomurex rosadoi spec. nov. (Figs. 7-9)

Type material: South Mozambique, off Quissico, in lobster traps, 135-140 m, holotype NMSA L4821/T1384 (lv). Paratypes: 2 coll. J. Rosado (1 lv, 1 dd), 1 C.P. Fernandes (1 lv), 1 R. Houart (1 dd).

Etymology: Named after José Rosado, Maputo, Mozambique, who discovered this new species and other interesting material.

Description: Shell of medium size for the genus, up to 48.6 mm in length at maturity (holotype), biconical, heavy, squamous. Spire high with 1.5 protoconch whorls, and 6.5 broad, convex, weakly shouldered teleoconch whorls. Suture adpressed. Protoconch large, whorls rounded, smooth, terminal varix thin, raised.

Axial sculpture of teleoconch whorls consisting of 12 high, rounded, nodose ribs on first whorl, 15 on second, 16 on third. Fourth to sixth whorls with 3 rounded, high, abapically webbed varices with short, open spines, and high intervarical ribs: 3 on fourth, 2 or 3 on fifth, 1 or 2 on last. Spiral sculpture of first teleoconch whorl of 5 rounded, moderately high cords, second and third with 6 or 7, fourth with 6-8 and 1 shallow thread between each pair of cords, fifth with 17-19 cords and threads, last whorl with 9 or 10 cords, and shallow threads. Aperture large, roundly-ovate. Columellar lip narrow, smooth, lip erect, adherent at adapical extremity. Anal notch shallow, broad. Outer lip erect, denticulate, with 9 or 10 weak lirae within. Siphonal canal short, broad, weakly bent dorsally at tip, narrowly open, with 2 webbed spines. Light tan or tan with darker coloured blotches on varices. Aperture white.

Operculum brown, ovate, with terminal nucleus. Radula unknown.

Remarks: There are seven Recent species of *Chicomurex* currently known: *C. elliscrossi* (Fair, 1974), *C. laciniatus* (Sowerby, 1841), *C. problematicus* (Lan, 1981), *C. protoglobosus* Houart, 1992, *C. superbus* (Sowerby, 1889), *C. turschi* (Houart, 1981), *C. venustus* (Rehder and Wilson, 1975). Four have a conical protoconch with 2.5 or more whorls, and are not similar to *C. rosadoi* spec. nov. Of the three remaining species, the protoconch of *C. elliscrossi* is still unknown, and *C. protoglobosus* has a large and globose protoconch of 1.5 whorls. However, the shell morphology of both species is quite different from *C. rosadoi* spec. nov. *C. turschi* (Fig. 10), the only similar species, is smaller at the same number of teleoconch whorls, and has a protoconch half the size of that of *C. rosadoi*. The intervarical axial ribs are lower, and more numerous: 3 or 4 vs 2 or 3 on penultimate whorl, 2 or 3 vs 1 or 2 on last whorl, while the spiral cords on first teleoconch whorls are less numerous, and more irregularly shaped: 3 or 4 vs 5 on first whorl, 4 vs 7 on second, 5 or 6 vs 7 on third, and 5 or 6 vs 8 on fourth.

Subfamily TYPHINAE Cossman, 1903

Genus *Siphonochelus* Jousseume, 1880

Type species (by original designation): *Typhis arcuatus* Hinds, 1843, Recent, South Africa.

Siphonochelus rosadoi spec. nov. (Figs. 4-6)

Type material: South Mozambique, off Zavora, trawling in 450 m, mud bottom (dd), holotype NMSA L4822/T1385 Paratypes: 1 AMS C.361853, 1 MNHN, 1 IRSNB, 2 Museu Historia Natural, Maputo, 2 C.P. Fernandes, Cascais, Portugal, 2. R. Houart, 1 I. Leitão, Maputo, Mozambique, 1 W. Massier, Margate, Natal, S. Africa, 1 E.A. Ramalho, Estoril, Portugal, 2 J. Rosado, Maputo, Mozambique.

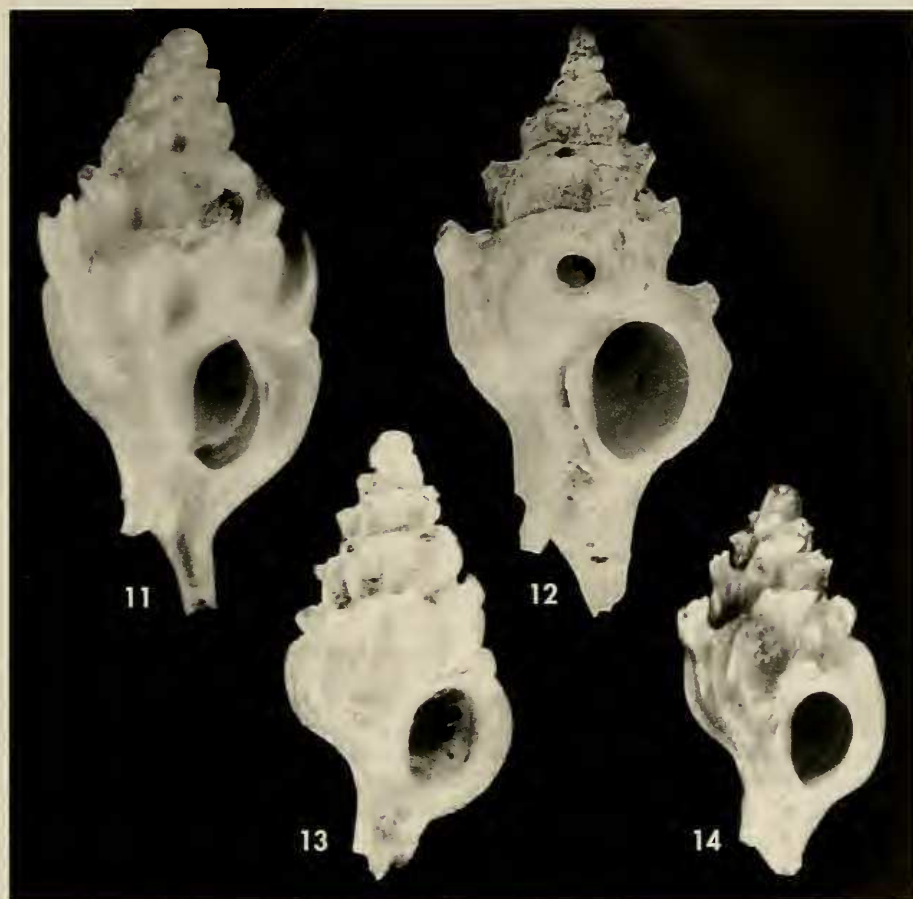


Figure 11. *Siphonochelus boucheti* Houart, 1991, South of New Caledonia, 24° 55' S, 168° 22' E, 527 m, 10.1 mm, holotype MNHN. Figure 12. *S. arcuatus* (Hinds, 1844), South Africa, off Cape St Blaize, 16 mm, coll. R. Houart. Figure 13. *S. nipponensis* Keen and Campbell, 1964, Japan, Tosa Bay, Shikoku, 200 m, 7.5 mm, NSMT 44065. Figure 14. *S. japonicus* (A. Adams, 1863), Japan, Honshu, Sagami Bay, 6.6 mm, NSMT 44066.

Figura 11. *Siphonochelus boucheti* Houart, 1991, sur de Nueva Caledonia, 24° 55' S, 168° 22' E, 527 m, 10,1 mm, holotipo MNHN. Figura 12. *S. arcuatus* (Hinds, 1844), Sudáfrica, frente a Cape St Blaize, 16 mm, coll. R. Houart. Figura 13. *S. nipponensis* Keen y Campbell, 1964, Japón, Tosa Bay, Shikoku, 200 m, 7,5 mm, NSMT 44065. Figura 14. *S. japonicus* (A. Adams, 1863), Japón, Honshu, Sagami Bay, 6,6 mm, NSMT 44066.

Etymology: Named after José Rosado, Maputo, Mozambique, who discovered this new East African muricid.

Description: Shell of medium size for the genus, up to 9.6 mm in length at maturity (holotype), broadly biconical, stout. Spire high with 1.5 protoconch whorls and

5 broad, weakly angulate, shouldered teleoconch whorls. Suture impressed. Protoconch large, broad, whorls rounded, smooth, terminal varix shallow, thin.

Axial sculpture of teleoconch whorls consisting of 4 high, strong, broad, rounded, smooth varices. Intervarical sculpture of a single, high rounded ridge, about midway between each pair of axial varices, slightly closer to succeeding varix. A rounded, or weakly flattened anal tube, originates from axial varice, although weakly detached from it, forming an angle of 80-100° with the axis of the shell. No apparent spiral sculpture.

Aperture broad, roundly-ovate. Columellar lip broad, thick, flaring, smooth. Outer lip erect, smooth. Siphonal canal short, abaxially bent, sealed. White.

Radula and operculum unknown.

Remarks: *Siphonochelus arcuatus* (Hinds, 1844) (Fig. 12) differs in having a larger shell at the same number of teleoconch whorls, a larger, more elongate last teleoconch whorl, a longer and

straighter siphonal canal, sharper and straighter axial varices.

S. japonicus (A. Adams, 1863) (Fig. 14) has a more elongate shell, a narrower last teleoconch whorl, a longer siphonal canal, and anal tubes directly originating from axial varices, more upward bent on last whorl.

S. boucheti Houart, 1991 (Fig. 11) also has the anal tubes slightly separated from the axial varices as in *S. rosadoi* spec. nov., however, the shell is narrower, more elongate, with a longer siphonal canal, more upwardly bent anal tubes on last whorl, and a smaller, narrower aperture.

S. nipponensis (Keen and Campbell, 1964) (Fig. 13), the most similar species, has a more elongate last whorl, a longer siphonal canal, upwardly bent anal tubes on last whorl, and narrower axial varices.

ACKNOWLEDGEMENTS

I am very indebted to César Fernandes, Cascais, Portugal, and to José Rosado and Isabel Leitão Maputo, Mozambique, for the loan of this very interesting material and gift of some specimens. I am also

grateful to A. Matsukuma, National Science Museum Tokyo for the loan of specimens. Many thanks also to Dick Kilburn, Natal Museum, Pietermaritzburg, South Africa, for reading the manuscript.

BIBLIOGRAPHY

- HOUART, R., 1986. *Chicoreus* (*Naquetia*) *triqueter vokesae* subsp. nov., a new name for a misidentified species (Gastropoda: Muricidae). *Apex* 1(3): 95-96.
- HOUART, R., 1990. New taxa and new records of Indo-Pacific species of *Murex* and *Haustellum* (Gastropoda, Muricidae, Muricinae). *Bulletin du Muséum national d'Histoire naturelle*, Paris, 4° sér., 12, section A, n° 2: 329-347.
- HOUART, R., 1992. The genus *Chicoreus* and related genera (Gastropoda: Muricidae) in the Indo-West Pacific. *Mémoires du Muséum national d'Histoire naturelle*, Zoologie (A), 154: 1-188.
- HOUART, R., 1995. The Ergalataxinae (Gastropoda, Muricidae) from the New Caledonia region with some comments on the subfamily and the description of thirteen new species from the Indo-West Pacific. *Bulletin du Muséum national d'Histoire naturelle*, Paris, 4° sér., 16, section A, n° 2-4: 245-197.
- HOUART, 1998. Description of eight new species of Muricidae (Gastropoda). *Apex* 13 (3): 95-109.
- PONDER, W.F. and VOKES, E.H., 1988. Revision of the Indo-West Pacific fossil and Recent species of *Murex* s.s. and *Haustellum* (Mollusca: Gastropoda: Muricidae). *Records of the Australian Museum*, suppl. 8: 1-160.
- VOKES, E.H., 1978. Muricidae (Mollusca: Gastropoda) from the eastern coast of Africa. *Annals of the Natal Museum* 23 (2): 375-418.